Page 3 of 4

bring the specification on page 23 and the Figures into full compliance with sequence rules 37 C.F.R. §1.821-1.825 by amendment to page 23 and the "Brief Description of the Drawings" in the substitute specification.

Applicants claim priority under 35 U.S.C. §120 and 35 U.S.C. §119 by amendment to the specification submitted herein.

Claim Objections

Amendments to claims 34, 43 and 46 herein should address the Examiner's objection to informalities in these claims.

Rejection of Claims under 35 U.S.C. §101

Claims 32-46 are rejected under 35 U.S.C. §101 as directed to non-statutory subject matter. Applicants have canceled claims 35-40 rendering moot objections to these claims. Applicants amendments to claims 32-34 and 41-46 limiting claimed subject matter to an "isolated" product, as suggested by the Office Action, should satisfy the Examiner's concerns in this regard.

Rejection of Claims under 35 U.S.C. §112

Claims 35-40 are rejected under 35 U.S.C. §112, first paragraph as containing subject matter that, according to the Office Action, was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. Applicants have canceled claims 35-40 rendering moot objections to these claims.

Claims 32-46 are rejected under 35 U.S.C. §112, first paragraph, as containing subject matter which, according to the Office Action, was not described in the specification in such a way as to reasonably convey to one skilled in the art that the inventors, at the time the application was filed, had possession of the claimed invention. Applicants have canceled claims 35-40 rendering moot objections to these claims. Applicant's amendments to claims 32-34 and 41-46 to encompass "an isolated nucleic acid molecule" or "isolated DNA molecule" as suggested by the Office Action, should satisfy the Examiner's concerns in this regard.

Rejection of Claims under 35 U.S.C. §112, second paragraph

Claims 32-46 are rejected under 35 U.S.C. §112, second paragraph, as being indefinite. Claims 35-40 are hereby canceled. Applicants amendments to claims 32-34 and 41-46 as suggested by the Office Action, should satisfy the Examiner's concerns in this regard.

Rejection of Claims under 35 U.S.C. §102(b)

Claims 32-46 are rejected under 35 U.S.C. §102(b) as being anticipated by U.S. Patent No. 4,959,314 to Mark et al. Claims 35-40 are hereby canceled. Applicants amendments to claims 32-34 and 41-46 in the manner suggested by the Office Action to recite "the nucleotide sequence as provided in" and "an isolated cDNA encoding the amino acid sequences" should satisfy the Examiner's concerns in this regard.

<u>Provisional Rejection of Claims under the Judicially Created Doctrine</u> of Obviousness-type Double Patenting

Claims 32-46 are provisionally rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claims 1-4 and 6 of co-pending application U.S.S.N. 08/915,004 in view of Mark et al. and over claims 5 of co-pending application No. 09/051,670 in view of Mark et al.

Applicants respectfully traverse this rejection and request that the Examiner hold this provisional rejection in abeyance until allowable subject matter has been identified.

CONCLUSION

The Examiner is encouraged to telephone the undersigned at 617-248-7044 if the Examiner believes that a telephone conversation will expedite prosecution of the instant patent application.

On the basis of the above amendments and remarks, reconsideration and allowance of the application and claims as mended is respectfully requested.

Respectfully submitted,

Date: November 7, 2000

Reg. No. 44,244

Tel. No.: (617) 248-7044

Fax No.: (617) 248-7100

Ronda P. Moore, D.V.M.

Attorney for Applicants

Testa, Hurwitz, & Thibeault, LLP

High Street Tower

125 High Street

Boston, Massachusetts 02110

Rmoore3999/63.1050205-1